

IN THE CLAIMS:

A complete set of all pending claims follows:

1. (ONCE AMENDED) A power module comprising:
 - (a) a board having at least one element mounted thereon; and
 - (b) at least one interconnect for electrically coupling the element to an end user's circuit card, wherein the interconnect is U-shaped, the interconnect further comprising a contact surface having a through hole, said through hole adapted to allow solder paste to flow into the interconnect to form a strong physical bond between the element and the end user's circuit card.
2. (ONCE AMENDED) The power module of Claim 1 wherein said interconnect further comprises a conductive structure having a sidewall.
4. The power module of Claim 1 wherein said board is formed from a plurality of layers.
5. The power module of Claim 1 wherein said board is formed of FR4.
6. The power module of Claim 1 wherein said power module further comprises a circuit formed on a plurality of layers.
7. The power module of Claim 1 wherein said board further comprises a surface for engagement with a pick and plane machine.
8. The power module of Claim 1 wherein said at least one element is a pair of planar magnetic cores.
9. The power module of Claim 1 wherein said board is stiffened by a metallic layer within the board.

10. The power module of Claim 1 wherein said at least one interconnect comprises three interconnects that are placed to form a stable plane.

11. The power module of Claim 1 wherein a solder paste is used to couple the interconnect to the end user circuit card.

12. The power module of Claim 11 wherein a thickness of said solder paste is greater than a combined tolerance of the board, the interconnect, and the end user circuit card.

14. (ONCE AMENDED) An interconnect for use between a power module and an end user circuit card comprising:

- (a) a first sidewall;
- (b) a contact surface adapted to contact said end user circuit card, said contact surface having at least one through hole, said through hole adapted for flow of solder paste into the interconnect; and
- (c) a second side wall, wherein the interconnect is generally U-shaped and conductive.

17. The interconnect of Claim 14 wherein the height of the first and second sidewalls are approximately identical.

18. The interconnect of Claim 14 wherein the height of the first and second sidewalls are within 2 mils of each other.

29. (ONCE AMENDED) A method of coupling a power module to an end-user circuit board comprising the steps of:

- (a) applying a solder paste to at least three mounting pads on said circuit board;
- (b) placing a power module having at least three interconnects onto the circuit board so that the interconnects contact to solder paste; wherein the solder paste flows through holes in the interconnects; and wherein a tolerance between the interconnects is absorbed in the solder paste; and

(c) heating the solder paste.

30. The method of Claim 29 wherein step (b) further comprises placing a power module having at least three U-shaped interconnects